



Department of Development Services

Building Division

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Ronald L. Lynn, Building Official/Director • Gregory J. Franklin, Assistant Director

SUBJECT: TG-10-2009 STRUCTURAL OBSERVATION

1.0 PURPOSE: The purpose of this technical guideline is to specify the requirements for structural observation for projects built within the jurisdiction of Clark County.

2.0 SCOPE: Structural observation shall be performed for those structures included in Seismic Design Category D, E, or F, as determined in 2006 IBC Section 1613, where one or more of the conditions outlined in 2006 IBC Section 1709.2 exist. Additionally, the Building Official is requiring structural observation on all buildings defined as resort hotels under Clark County Code Title 30, high rise buildings as defined in the Southern Nevada Amendments to the 2006 IBC, and atriums as defined in the 2006 IBC regardless of the Seismic Design Category.

3.0 ABBREVIATIONS & ACRONYMS:

BAC: Building Administrative Code of Clark County

CCDDS-BD: Clark County Department of Development Services—Building Division

IBC: International Building Code

TG: Technical Guideline


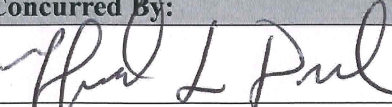
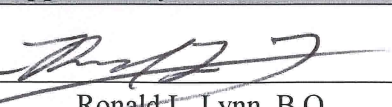
4.0 DEFINITIONS: For the purposes of this TG certain terms, phrases, words and their derivatives shall be construed as specified in this section and the BAC.

Approved Construction Document: Construction documents that have been reviewed and accepted for permit by the Building Official pursuant to the BAC.

Atrium: See 2006 IBC Section 404. An opening connecting two or more stories other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or mezzanines that comply with 2006 IBC Section 505.

APPROVED DATE: SEPTEMBER 11, 2009

EFFECTIVE DATE: OCTOBER 31, 2009

Written By:	Concurred By:	Approved By:
 John S. Telford, P.E. Principal Engineer	 Theodore L. Droessler, P.E. Manager of Engineering	 Ronald L. Lynn, B.O. Director/Building Official

Engineer of Record: The registered design professional in responsible charge of the structural design of the subject project.

High Rise Building: A building with an occupied floor located more than 55 feet above the lowest level of fire department vehicle access.

Registered Design Professional: An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed.

Resort Facility: See Title 30.08.030 Clark County Unified Development Code.

Structural Observation: The visual observation of the structural system by a registered design professional for general conformance to the approved construction documents at significant stages and at completion of the structural system. Structural observation does not waive the responsibility for the inspection required by the BAC, 2006 IBC Section 1704, or other sections of 2006 IBC, referenced standards, and approved TGs.

Structural Observer: The registered design professional in responsible charge of the structural observation services. The structural observer is required to have the minimum licensing requirements as the project's engineer of record. The engineer performing the field structural observation shall be employed by the same firm as the structural observer and shall have a current civil or structural professional engineering license from the State of Nevada.

5.0 REFERENCES:

2008 Clark County Building Administrative Code

2006 International Building Code

Southern Nevada Amendments to the 2006 International Building Code

Title 30 Clark County Unified Development Code, current adopted edition

6.0 RESPONSIBILITIES:

6.1 CCDDS-BD:

CCDDS-BD shall require structural observation as specified in the scope of this TG.

6.2 Owner:

The owner shall employ a structural observer to perform the structural observations in accordance with the approved structural observation plan. It is the owner's responsibility to coordinate with the contractor and the structural observer to ensure that the structural observer is able to perform the duties as required in the approved structural observation plan.

6.3 Structural Observer:

The registered design professional hired by the owner shall perform the structural observations in accordance with the approved structural observation plan and shall submit reports as required in this TG.

7.0 PROCEDURE:

7.1 Prior to Permit Issuance:

- 7.1.1 CCDDS-BD shall notify the point of contact on the permit application and the engineer of record that structural observation is required in the initial plan review correction letter. This notification shall include a request to provide a structural observation plan which would outline the schedule of the required structural observations.
- 7.1.2 The engineer of record shall submit a written structural observation plan to CCDDS-BD for approval. This document is required to be sealed by the engineer of record. The plan shall require structural observation to be performed at significant construction stages and at the completion of the structural system. At a minimum, structural observation shall be performed for all lateral elements, prior to placement of concrete for the foundation system, for all atypical levels of construction, 20% of the remaining levels rounded up to the nearest level, at the completion of the structural system and as required by the engineer of record. Additional structural observations may be required by the Building Official depending upon the complexity of the project.
- 7.1.3 CCDDS-BD shall review, provide any required corrections, and approve the structural observation plan. Once approved by the CCDDS-BD the structural observation plan is considered an approved construction document. Any revisions to the approved structural observation plan shall be submitted to and approved by CCDDS-BD prior to execution.
- 7.1.4 The owner shall employ a registered design professional to perform the structural observations and notify CCDDS-BD in writing of the selected structural observer.
- 7.1.5 The selected structural observer shall review the construction documents and the structural observation plan. The structural observer shall submit a written statement to the Building Official prior to permit issuance. The structural observer's written statement shall state that the construction documents and the structural observation plan have been reviewed and contain an acknowledgement that all requirements are understood. The written statement shall also include the names and license number(s) of the structural observer and those that will perform the field structural observations.

7.2 After Permit Issuance:

- 7.2.1 The structural observer shall perform the required structural observations in accordance with the approved structural observation plan. No concrete shall be placed or any portion of the structural system covered or loaded prior to the structural observation and resolution of any noted discrepancies.
- 7.2.2 It is the Contractor's responsibility to coordinate the Structural Observation visits in such a way that the engineer performing the structural observation is able to perform the duties outlined in the Structural Observation plan and allow for the implementation of any corrections necessary.

- 7.2.3 The structural observer shall submit Form 802 to CCDDS-BD indicating that the required structural observation has been performed after each site observation has been completed in accordance with the approved structural observation plan. Form 802 shall be submitted to the Building Official within 24 hours of the structural observation being completed. Form 802 can be found on the Clark County website at:

http://dsnet.co.clark.nv.us/dsweb/building_services/forms/struc_observation_rpt.pdf

- 7.2.4 The structural observer shall notify the contractor, special inspector, CCDDS-BD, and the owner of any observed discrepancies.
- 7.2.5 The owner shall coordinate with the contractor and ensure that areas with unresolved discrepancies are not covered or loaded until all discrepancies are resolved.
- 7.2.6 CCDDS-BD shall issue the appropriate enforcement action and ensure that all discrepancies are resolved.
- 7.2.7 The structural observer shall submit final structural observation report to CCDDS-BD at the completion of the project. The final structural observation report shall include a cover letter formatted in accordance with Appendix A and copies of all of the Form 802's that were submitted.
- 7.2.8 CCDDS-BD shall review and accept the final structural observation report.

8.0 RECORDS:

All documents associated with the structural observation shall be sent to the Records Division.

9.0 ATTACHMENTS:

Appendix A – Final Structural Observation Cover Letter Template
Appendix B – Structural Observation Report Form 802

10.0 REVISION HISTORY:

Title	Revision/Approved Date	Effective Date
TG-10-2009	September 11, 2009	October 31, 2009

Appendix A

Final Structural Observation Report Cover Letter Template

**COMPANY LETTERHEAD
ADDRESS, TELEPHONE & FAX #**

CERTIFICATE OF COMPLIANCE

CLIENT INFO

DATE

Final Structural Observation Report

Project Name:

Project Address:

Permit No.

Project No.

COMPANY NAME performed and completed the structural observation services for the **PROJECT NAME** project and find the work is in compliance with the Clark County Department of Development Services – Building Division approved structural observation plan.

Only licensed engineers were utilized to perform those structural observations as required by the approved structural observation plan. Any items that were found to be in noncompliance with the approved construction documents were brought into compliance.,.

Attached for your review are the structural observation reports and other applicable reports.

CCDDS-BD REVIEW STAMP

REGISTERED DESIGN
PROFFESIONALS SEAL HERE

Appendix B

Structural Observation Report Form 802

STRUCTURAL OBSERVATION REPORT

PERMIT NO: _____ DATE: _____

ADDRESS: _____

LOCATION (i.e.; foundation, level 1, etc.): _____

Structural Observer Statement and Notifications

I hereby acknowledge that I performed structural observations in accordance with the approved structural observation plan.

☐ No Discrepancies Observed

☐ Discrepancies Observed

List discrepancies: _____

☐ Discrepancies Resolved

☐ Attachments

This form was submitted to the following individuals.

Entity	Name
Contractor	
CCBD	
Owner/Owner's Representative	
Special Inspector	

Firm Name	
Field Observer's Name	
Field Observer's Signature	
Structural Observer's Name	

Affix seal, sign and date